UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
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October 13, 2015

Mr. David A. Charters, P.E.,
Manager, Design and Engineering
GoTriangle
P.O. Box 13787
Research Triangle Park, North Carolina 27709

SUBJECT: Draft Environmental Impact Statement (DEIS) and Draft §4(f) Evaluation for the Durham-Orange Light Rail Transit (D-O LRT) Project, Durham and Orange Counties, North Carolina; ERP No.: FHW-E54014-NC; CEQ No.: 20150240

Dear Mr. Charters:

The U.S. Environmental Protection Agency (USEPA) Region 4 Office has received and reviewed the subject document and is commenting in accordance with §309 of the Clean Air Act (CAA) and §102(2)(C) of the National Environmental Policy Act (NEPA). We are providing cooperating agency remarks for your consideration. GoTriangle (formerly Triangle Transit Authority), in cooperation with the Federal Transit Administration (FTA), prepared a Draft Environmental Impact Statement (DEIS) which proposes several alternatives for a high-capacity transit service within the Durham-Orange (D-O) Corridor—an approximately 17-mile corridor from southwest Chapel Hill to eastern Durham, North Carolina. The proposed project also entails the construction of 17 stations and a Rail Operations and Maintenance Facility (ROMF). The purpose of this project is to augment mobility, expand transit options, serve major employment centers, increase transit operating efficiency, and sustainably support land use plans that promote compact development within a rapidly-growing metropolitan area.

The USEPA staff has been participating on the D-O LRT Technical Advisory Committee for the proposed project, including the purpose and need, the detailed study alternatives to be carried forward and the alignment review. Specific technical review comments on the DEIS are attached to this letter (See Attachment A).

The USEPA rated the DEIS as 'Environmental Concerns' (EC-2), indicating that several environmental concerns requiring additional information regarding impacts to the natural and human environment, including environmental justice (EJ) were identified. The USEPA's review of the DEIS identified the opportunity for potential avoidance and minimization of impacts as

well as mitigation measures related to stream and wetland impacts, water quality, and EJ and community health issues. The '2' rating indicates that the DEIS information and environmental analysis will require some additional information and clarification as the project moves forward, including: stream and wetland impacts, §303(d) listed impaired waters, residential and business relocations, socio-economic and community health issues, and a re-assessment and clarification of potential minority and low-income population impacts.

In general, the USEPA strongly supports the development of mass transit options for the Research Triangle Park metropolitan area as it provides a meaningful alternative to sole reliance on surface transportation such as highways and local collector roads for mobility. The USEPA also supports the proposed project's purpose and need and detailed study alternatives. With appropriate disclosure and proper mitigation, this project should result in reduced adverse impacts. The USEPA recommends that all of the technical comments in the Attachment be addressed in the Final EIS (FEIS). All relevant environmental impacts that have not been disclosed in this document or covered in the FEIS should also be addressed in additional NEPA documentation prior to the issuance of a Record of Decision (ROD).

Dr. Cynthia F. Van Der Wiele, of my staff, will continue to work with you as part of the D-O LRT Technical Advisory Committee in the identification of reasonable and feasible alternatives. Should you have any questions concerning these comments, please feel free to contact her at vanderwiele.cynthia@epa.gov or (919) 450-6811.

Sincerely,

Christopher A. Militscher
Chief, NEPA Program Office
Resource Conservation and Restoration Division

w/ Attachment

Cc: S.A. Mitchell, FTA, Region IV
J. Thomas, USACE Raleigh Field Office
R. Ridings, NCDWR
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ATTACHMENT A

Draft Environmental Impact Statement
Durham-Orange Light Rail Transit Project, Durham and Orange Counties
ERP No.: FHW-E54014-NC; CEQ No.: 20150240

Project Purpose and Need

The purpose of the project are outlined in Section 1.4 of the DEIS and are summarized as: to provide a high-capacity transit service within the Durham-Orange (D-O) Corridor between Chapel Hill and Durham [along the NC 54, I-40, US 15-501, Erwin Road, and NC 147 transportation corridors] that improves mobility, increases connectivity by expanding transit options, and supports future development plans.

The needs for the proposed project are detailed in Section 1.5. These include: 1) enhance mobility—by providing a competitive, reliable alternative to auto use that supports compact development while increasing transit operating efficiency; 2) increase connectivity by expanding transit options between Durham and Chapel Hill to enhance and seamlessly connect with the existing transit system and by serving major activity and employment centers between Durham and Chapel Hill; and 3) promote future development by supporting local land use plans that foster compact development and manage future growth while maximizing the potential for economic development near activity centers.

The USEPA generally supports the purpose and need of the project as a viable solution that promotes a more sustainable means of managing growth and transportation needs while supporting economic growth and protecting natural and human resources.

Detailed Study Alternatives

The DEIS Selection of a Build Alternative was based on four key decisions: transit technology, alignment, station locations, and rail operations and maintenance facility (ROMF) location. Light rail was selected as an alternative that best meets the Purpose and Need due to higher forecasted ridership and its ability to promote transit-oriented development, while conventional bus, bus rapid transit, streetcar, and commuter rail transit were eliminated from consideration. The USEPA concurs with the elimination of these transit technology alternatives.

The DEIS evaluated the No Build alternative along with several light rail alternatives. The No Build alternative examined existing and planned transportation programs and projects scheduled to be constructed and open before the forecast year 2040 (and included in both the State Transportation Improvement Plan (STIP) and the Durham Chapel Hill Carrboro Metropolitan Planning Organization's transportation plan), and was used as a baseline against which the Build alternatives were compared in relation to impacts to the natural and human environment.

Four potential crossings of Little Creek between Hamilton Road and the proposed Leigh Village State (Alternatives C1, C1A, C2, and C2A) were evaluated in detail, with Alternative C2A

identified as the NEPA Preferred Alternative. Additionally, three potential crossings of New Hope Creek and Sandy Creek between Patterson Place and South Square (Alternatives NHC LPA, NHC 1, and NHC 2) were also evaluated in detail; NHC 2 was identified as the NEPA Preferred Alternative.

USEPA Recommendations: Due to the high potential for large mammal interactions [wildlife collisions] with the D-O Light Rail, the USEPA encourages collaboration with the NC Wildlife Resources Commission (NCWRC) and the US Fish & Wildlife Service (USFWS) to design appropriate wildlife under- and overpasses to reduce wildlife mortality and increase safety and reliability of the rail in "hotspot" areas along the corridor.

Seventeen (17) rail stations are proposed with two station alternatives evaluated for the Duke/VA Medical Center Station location: Duke Eye Center and Trent/Flowers Drive. The success of the D-O LRT project depends on ridership levels and in strategically locating stations where demand will be the highest. These stations may have an impact on air quality, community resources, land use (i.e., transit-oriented development along with in-fill and redevelopment), impervious surfaces, stormwater management, etc.

USEPA Recommendations: The USEPA encourages green building design, low-impact development (LID) design for managing stormwater runoff into the §303(d)-listed Jordan Lake watershed, and other sustainable design and building practices to be used in planning, design, and construction. Further, the USEPA requests that all potential natural and human environment impacts from rail stations, including the park and ride lots, be discussed in the FEIS.

Five (5) alternatives for the ROMF were studied in detail: Leigh Village, Farrington Road, Patterson Place, Cornwallis Road, and Alston Avenue. Farrington Road was identified as the NEPA Preferred Alternative.

USEPA Recommendations: USEPA notes that the brief paragraphs on each ROMF alternative did not provide sufficient detail to support or eliminate any particular alternative. The FEIS should provide the necessary impact detail in order for decision-makers to have the necessary comparative information between the alternatives.

Section 2.3.2.1 discusses light rail technology and proposed vehicle capacity. Vehicles are slated to carry 40 – 60 seated and up to 125 (including standing) passengers.

USEPA Recommendations: The vehicle specifications did not include bicycle capacity or how bicycles would be accommodated on board each rail vehicle. While some bicyclists and bicycle commuters may park their vehicle at a particular station, the USEPA anticipates that many would wish to take their bicycle on board for use in reaching their final destination(s) from a station. The USEPA supports vehicle configurations that maximize the ability for passengers bringing bicycles along to be accommodated on board as this would support the Purpose and Need of the project.

Transportation

Chapter 3 presents existing conditions along with the potential consequences/impacts to transportation resources including transit service, parking, bicycle and pedestrian facilities, and roadways. Table 3.2-1 lists the traffic impact criteria (Level of Service). Section 3.2.2 describes the improvements that would be necessary due to the D-O LRT project, while Table 3.2-5 lists the roadway modifications that would be proposed as part of the NEPA Preferred and Project Element Alternatives.

USEPA Recommendations: The USEPA notes that natural resource and human environment impacts resulting from these roadway modifications—in some cases, new two-lane connector roadways—have not been analyzed or included in the lists of impacts. Consequently, it is not possible to know the potential impacts to aquatic resources, residences, businesses, historic properties, environmental justice communities, costs, etc. This issue should be addressed in the FEIS or subsequent environmental documentation prior to the issuance of a ROD. In addition, safety features that avoid or minimize conflicts between large mammals (e.g., deer strikes) as well as bicycles and pedestrians adjacent to the D-O Light Rail should also be considered during final planning and design.

Affected Environment and Environmental Consequences

Socioeconomic and Demographic Conditions

According to Table 4.2-2 Demographic Conditions, approximately 18% of the population in the study area are of Limited English Proficiency (LEP), with a high of 19% LEP concentrated in the Duke West Campus & Medical Center portion of the study area. East Durham has 50% of households with no car compared to 22% of the study area. The percentage of people under 18 and 65 years old and older is approximately 21% in the study area and exceeds that percentage in five of the eight sections of the study area. Population projects in the U.S. indicate a rapidly-growing population of those ages 65 and older, with many living below or near the poverty line, particularly in minority populations (DHHS/AOA, 2010; DHHS/AOA(b), 2010). The health and social impacts due to changes in transportation systems and local roadway connectivity may be more severe in older populations who rely more heavily on pedestrian infrastructure and/or transit (Balfour and Kaplan, 2002). Section 4.2 describes the age of the population, but does not assess potential impacts to this population in Section 4.2.3 Environmental Consequences.

USEPA Recommendations: The assessment of how vulnerable populations, such as the elderly, may or may not be impacted by the proposed light rail project should be addressed in the FEIS and the FTA should determine if this population is being adversely and disproportionately impacted from the proposed project.

Neighborhoods and Community Resources

Section 4.3 describes neighborhoods and community resources within the D-O Corridor and examines the impact of the project on community cohesion and community resources. The NEPA Preferred Alternative would be located directly behind the Glenwood Elementary School

and would form a barrier between the school and the neighborhood. Additionally, protective fencing would also restrict the use of the adjacent wooded area as an outdoor classroom. The DEIS proposes mitigation measures for this community resource impact by constructing a pedestrian underpass to connect the trails and enhance safety. Within the Old West Durham/Duke East Campus neighborhood, the historic Smith Warehouse will not receive a direct impact; however, warehouses that are currently used by the Duke University transportation services department would be demolished to accommodate the NEPA Preferred Alternative and the proposed Buchanan Boulevard Station. It is unclear from the DEIS whether or not these warehouses are also historic tobacco warehouses or whether they are of newer construction. The Alston Avenue ROMF, studied as a "project element alternative" notes that construction of the facility would necessitate the relocation of several businesses including Brenntag and Eastern Organics, resulting in the loss of 150 – 250 jobs. However, in its present location, Brenntag is grandfathered as a non-conforming use and currently unable to expand their operations; consequently, this business has been exploring other sites to meet their needs and grow. The loss of employment opportunities may not be entirely accurate.

USEPA Recommendations: The USEPA encourages further collaboration with Glenwood Elementary School to design an appropriate access point to the wooded area for continued use by students and faculty. The Patterson Place and Alston Avenue ROMF sites *may* have community cohesion issues. However, it is unclear from the DEIS whether the Alston Avenue site is actually not viable or if the Brenntag site can be redeveloped under the NC Brownfields Program.

Visual and Aesthetic Conditions

USEPA Recommendations: The USEPA supports the use of vegetative buffers to ameliorate visual, noise, and air quality impacts from the proposed light rail transit system.

Historic and Archaeological Resources

Section 4.5 addresses Historic and Archaeological Resources. In the analysis, 13 of the 25 architecturally historic properties would have No Effect from the NEPA Preferred Alternative, while the remaining 12 properties would have No Adverse Effect. A landscaped buffer is proposed for the Rocky Ridge Historic District, the Highland Woods Historic District, the Walter Curtis Hudson Farm, and the Ruth-Sizemore Store. However, no mitigation has been proposed for the remaining properties.

USEPA Recommendations: The FEIS should address what measures will be proposed to alleviate the No Adverse Effect on the historic properties. If no measures are proposed, documentation should include why mitigation is not possible since the majority of these building and historic districts are in active, daily use by the citizens (including children) of Durham and Durham County, and represent vital community resources.

Parklands and Recreational Areas/Section 6(f)

The NEPA Preferred Alternative has the highest impacts to Section 6(f) resources with a total acreage of 13.4 acres.

USEPA Recommendations: The USEPA encourages GoTriangle to work with the staffs of University of North Carolina-Chapel Hill, the N.C. Botanical Garden, U.S. Army Corps of Engineers, and Duke Forest during final design to develop further avoidance and minimization of impacts and to locate suitable mitigation for these impacts.

Water Resources

The study area included 400-foot wide rail corridors for each alternative, the proposed rail stations and park-and-ride lots, and the proposed ROMFs. The study area did not include any desk or field investigation of potential impacts to water resources from roadway improvements necessitated by the D-O Light Rail Transit project. The NC Division of Water Resources (NCDWR) classifications for waters within the project study area are either Water Supply (WS)-IV, WS-V, or Nutrient Sensitive Waters (NSW); thus, stormwater runoff drains to water supply watersheds and/or waters that are sensitive to additional pollutants. One stream is listed on DWR's 2012 §303(d) list of impaired streams. All aquatic resources drain to Jordan Lake and are subject to Cape Fear or Neuse River riparian buffer rules. The D-O Light Rail Transit Project falls within the Federal Emergency Management Agency (FEMA) 100-year floodplain in multiple locations as well as the FEMA 500-year floodplain. The NEPA Preferred Alternative would impact: 3,413 linear feet of streams; 0.558 acres of jurisdictional wetlands; 4.97 acres of riparian buffer zone 1 and 4.10 acres of zone 2; 6.42 acres of the 100-year floodplain; and 0.378 acres of the 500-year floodplain. With the exception of the Alston Avenue ROMF site, all other corridor and ROMF alternatives would incur greater impacts to aquatic resources.

USEPA Recommendations: Further avoidance and minimization during final design will be necessary to reduce impacts to aquatic resources and riparian buffers, particularly those streams and wetlands that have a higher quality rating using the NC Stream Assessment Methodology (SAM) and the NC Wetland Assessment Methodology (WAM) respectively. The USEPA encourages engineering design that incorporates resiliency strategies into the rail corridor to mitigate the likelihood of flooding in low-lying, flood-prone areas in addition to the identified FEMA 100- and 500-year floodplains. Such design will ensure that the project Purpose and Need is met with regard to a robust, reliable transit system as well as mitigate for extreme weather events that are anticipated to increase as a result of climate change.

Air Quality: Greenhouse Gas and Climate

Executive Order (EO) 13653 (November 2013) was intended to prepare the U.S. for the impacts of climate change by taking actions to enhance climate preparedness and resilience. In December 2014, the Council on Environmental Quality (CEQ) released an updated draft guidance[1] to replace the 2010 draft. This guides how federal agencies should consider the effects of greenhouse gas emissions and climate change in their NEPA reviews. Agencies should consider the potential effects of a proposed action on climate change as indicated by its greenhouse gas (GHG) emissions and the implications of climate change for the environmental effects of a proposed action. While the USEPA understands that it may be "analytically problematic to

[1] See: https://ceq.doe.gov/current_developments/docs/nepa_revised_draft_ghg_guidance_searchable.pdf

conduct a project-level cumulative effects analysis", the DEIS did not sufficiently follow the 2014 draft guidance as detailed on page 4 and further described in IV. Considering the Effects of Climate Change on the Environmental Consequences of a Proposed Action (pages 21-25) in terms of addressing climate change in terms of resiliency was not addressed in the DEIS.

USEPA Recommendation: The FEIS should qualitatively address the effects of climate change on the environment and the proposed rail. Additionally, during the final design of the rail, climate change mitigation and resiliency strategies should also be incorporated to reduce vulnerability and ensure a reliable transportation system. The USEPA encourages an assessment of the vulnerability of the rail corridor to extreme weather and the development of cost-effective methods to enhance the resilience of the transit system.

Environmental Justice

EJ Demographics: The project is located in the vicinity of communities with EJ concerns. As described in the DEIS, the minority population is 51% of the population in the project area with the highest concentrations located in northeastern portion of the D-O Corridor and the low-income population is 43% of the population in the area which is meaningfully greater than the average for Orange County at 25% and Durham County at 26%.

Table 5.2-1 provides a summary of EJ populations within the D-O Corridor and includes the evaluation areas, total population and percent minority and low income population. The table does not include an ethnic breakdown of the minority populations to better identify groups that may be served or impacted by the project and to develop effective public involvement and outreach strategies.

USEPA Recommendations: The USEPA recommends that the FEIS include a table that breaks down the minority populations by ethnicity. It would also be helpful to include the demographic information related to percent minority populations and low-income populations for the State of North Carolina for Reference.

Figure 5.2-1 is a map of EJ populations within the D-O Corridor that depicts the alignment, alternatives, stations and rail operation and maintenance facilities (proposed) in the study area. The map depicts areas with high concentrations of minority and low-income populations based on the criteria described on page 5-6. The maps also provides a good summary of the minority and low income populations.

USEPA Recommendation: We request that the FEIS include a separate chart with minority and low-income information by numbered block group and overlay a map such as Figure 5.2-1 with the affected block groups in the area.

The USEPA recognizes the importance of language access to Federal programs and projects and acknowledges the FTA and GoTriangle efforts for engaging and linking communities with limited English proficiency to information and tools. The DEIS highlights varied outreach activities to EJ communities including providing Spanish and Chinese translation at public open houses, public meetings, or in community newspapers, staffing project information at community

health fairs and festivals to engage diverse stakeholders. The USEPA further acknowledges the inclusion of information related to the historical impacts experienced by EJ communities within the evaluation area.

USEPA Recommendations: The USEPA recommends that the FEIS continue to include public comments related to EJ as part of an ongoing responsiveness summary and indicate issues that remain unresolved. Secondly, the USEPA recommends that every effort should be made to continue to work with residents to ensure that appropriate replacement housing is available. We further recommends that the FEIS summarize or reference efforts made to avoid and minimize acquisitions and displacement impacts to EJ communities along US-15-501 and east Durham area within Section 5.6.10, and identify the numbers or percentage of proposed relocations or acquisitions that are located in areas with high concentrations of EJ populations. Based on the information included in Table 5.4.1, it appears to the USEPA as though the displacements will not result in "fragmented" or isolated pockets of homes that are separated from the remaining portion of the community in these areas.